Information Technology

Performance Assessment Tasks

Version 3.0

based on

Vermont Information Technology Grade Expectations

Vermont Department of Education

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History

The Information Technology Performance Tasks contained in this document were originally created in 2002 by a group of teachers in northwestern Vermont with the support from the Vermont Information Technology Association for the Advancement of Learning (VITA-Learn). Through leadership provided by the Vermont Department of Education, these tasks became the basis of the Information Technology Grade Expectations (GEs). After several meetings were held throughout the state where over a hundred Vermont educators gave their feedback, the final document was redrafted and published. Although the original Performance Tasks provided the basis, significant and substantial changes were made based on the input of Vermont educators who attended those meetings. Finally, led by the Department of Education, the revised Performance Tasks in this document were aligned to the new Technology Grade Expectations.

Why Assess Information Technology?

Many educators have long held that assessing students' information technology knowledge and skills should be a part of what every educator does on a regular basis. They believe in the new digital world it is simply the right thing to do. We owe it to our students to be certain they have the digital skills to succeed in the 21st century. With the advent of ***No Child Left Behind Act***, the need to assess our students became even more clear.

> ''(A) To assist every student in crossing the digital divide by **ensuring that every student is technologically literate by the time the student finishes the eighth grade**, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.

Part D—Enhancing Education Through Technology - SEC. 2402. Purpose and Goals.. Page 404

> ''(1) … to improve the capacity of **all** teachers teaching in schools served by the local educational agency **to integrate technology effectively into curricula and instruction.**

Part D—Enhancing Education Through Technology - SEC. 2414. Local Applications. Page 414

In Vermont we are also driven by **Act 60** and later **Act 68** which states that all standards identified in the Vermont Framework must be assessed annually in each of the framework grade clusters. There are several information technology skills identified in the Vermont Framework.

Assessing Technology Grade Expectations

There are multiple ways of assessing the Information Technology Grade Expectations. These include traditional methods of testing such as paper and pencil tests (which we don't recommend), portfolios, purposeful and structured observation, surveys, and Performance Tasks. This document is about Performance Assessment Tasks.

About Performance Tasks

Performance Tasks are ones which require students to demonstrate that they have mastered specific skills and competencies by performing or producing something. This type of assessment provides teachers with information on how a child understands and applies knowledge. In a performance, students construct rather than select responses. Teachers should share scoring criteria for the assessment task with students prior to working on the task

There are several different ways to record results of performance-based assessment (Airasian, 1991; Stiggins, 1994)

- Checklist Approach – When using this you only have to indicate whether or not certain elements are present in the performances.
- Narrative/Anecdotal Approach – When teachers use this, they write narrative reports of what was done during the performance. From these reports, teachers can determine how well their students met the standards.
- Rating Scale Approach – When teachers use this, they indicate to what degree the standards were met. Usually teachers will use a numeric scale. For instance, one teacher may rate each criterion on a scale of one to five with one meaning "skill barely present" and five meaning "skill extremely well executed."
- Memory Approach – When teachers use this, they observe students performing the task without taking any notes. They use the information from their memory to determine whether or not the students were successful. (Please note that this approach is not recommended.)

Flexibility of Tasks

The Tasks contained in this document are intended to be flexible. That is, teachers, schools and districts are encouraged to use them in ways that best meet their needs. They may be used as they are, broken apart and revised or simply used as examples. Some expectations are covered in more than one task. If all tasks are implemented, all Grade Expectations will be assessed.

Content Neutral Tasks

The Tasks are content neutral. They may be integrated into multiple content areas. We strongly encourage teachers to embed them into content in an integrated fashion. The intention is that they will make the curriculum stronger, easier to teach and learn, expand learning opportunities in the present curriculum, and create entirely new opportunities for learning within the content areas that were previously not possible. As we move forward, it is our hope that content-rich examples and benchmarks will be published and made available to all Vermont educators.

Task Integration into Content Areas

We strongly recommend that these tasks be purposefully tied to curriculum. Schools and districts must embed these tasks throughout the curriculum development cycle, departments, grade level or team meetings

Formative or Summative Assessment

There is often a fine line between instruction and assessment. Teachers must provide students multiple opportunities to develop the skills noted in the Grade Expectations prior to formal assessment. We suggest that these assessment tasks become the basis for the development of instructional tasks that teachers develop in order to prepare their students for evaluation.

There are two types of assessment: Formative and Summative. Formative assessment often occurs almost simultaneously with instruction. Its purpose is to provide students with immediate and useful feedback about what they are supposed to know and be able to do. They are often informal and may be embedded directly in the learning experience. Summative assessments provide a summary of what the student has learned. They usually occur at the end of a lesson or unit of study. Generally, they are not used to give feedback to students but rather to determine how the individual or group stands up against predefined criteria. The Information Technology Performance Assessment Tasks in this document are intended to be Summative.

Performance Tasks in the Early Grades

There are very few expectations to be assessed in PreK-K. Consequently, we have not developed Tasks for this level. Primary teachers must look at subsequent grade expectations to have a greater understanding of the learning opportunities they must provide for their students in order to prepare them for assessments in the subsequent grades.

Referencing the Grade Expectations

In the previous edition of the Technology Performance Assessment Tasks, the tasks were followed by a rubric. It is these rubrics that became the basis for the current Grade Expectations. The revised Performance Tasks in this document are followed by the actual Grade Expectations that will be assessed in that particular task. As you will see, they are not in rubric format. If a school/district wishes to put them in a rubric format, they may want to use the format that was used in the original Performance Task document. There were three levels to the rubric in that document. Level 1- if a student did not meet the expectation it was noted that they needed assistance to complete that part of the task, Level 2 – if a student met the expectation independently, and Level 3 if a student exceeded the expectation to a degree at or better then the next grade (cluster) level. There are a few places in the Grade Expectations document where the authors of this document have attempted to clarify the expectation. When that is the case it will be *italicized* and start with… *Note.*

Time for Full Implementation

Implementation of a successful assessment program does not happen overnight. Schools/districts should develop an implementation strategy and timeline. Normally, we should not expect students who have never had instruction using a complicated piece of software to master it and be assessed in the period of one instructional unit… or even in one academic year. Nor can we expect that teachers will extend their units of instruction over long periods of time so that their students are at the mastery level.

Instructional Guide

Students must be given multiple opportunities to develop their "expertise" using technology equipment and applications. Consequently, if students are going to be assessed in a specific grade using certain functions of a software application, the concepts must be introduced and reinforced in previous years. How do we determine what needs to be introduced and reinforced and when this should occur? Clearly, districts can do this for themselves. It is our hope to develop a sample Instructional Guide and make it available to all districts in the near future.

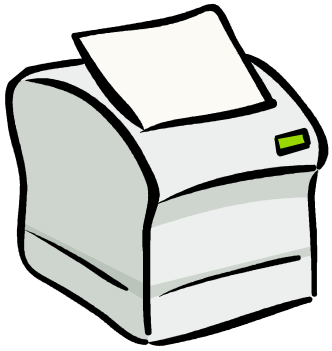
Tools and Procedures for Collecting, Recording, Managing and Reporting

Teachers, schools, and districts must develop tools and procedures for assessing the Technology Grade Expectations. How assessment occurs, using what tools, how the results will be recorded and finally reported are all questions that will need careful consideration. The more standardized the assessments and tools, the greater the chances that your results will be valid and reliable.

Final Note

Not all knowledge and skills in the Grade Expectations are easily assessed in a performance task. Some are best assessed over time. Consequently, some of the Grade Expectations are not specifically referenced in the performance tasks. For your convenience, these are listed after the last task in each grade cluster in a table called On-going. Please note that even though these tasks must be assessed over time, it is important to be purposeful about the assessment and document results as you normally would for a performance task.

Technology Performance Assessment Tasks



Grades 1-2

Grade Cluster 1-2 Task # 1

The Product: A Poster
The Components: Visual Organizer, Paint Program
The Task:
Students will create a poster that demonstrates their understanding of a curricular concept that involves more than one stage of development. Once a topic is selected/assigned, students will use a teacher created visual organizer template to organize what they have learned about the topic.
When the initial learning and organizing phase is complete, students will use a Paint program to visually illustrate a progression from one stage of development to the next. Once the "painting" phase is complete, students will add text to their poster. They will use different font sizes and demonstrate their ability to **bold face**, *italicize*, and underline.

The Rationale:
Using a visual organizer, students can easily manipulate existing and new ideas and organize them into a form that makes sense to them. They can easily adjust this form based on adult input. Students will use a paint program to create the first visualization of the concept they are trying to demonstrate. Students will build on the initial visualization to create further stages of development A poster is an ideal place to manipulate styles. Changing font sizes, bold facing, etc. are can be effectively used on Posters to bring emphasis to different aspects of information.

IT1 - Basic Operations & Concepts

Not Assessed in this task

IT2 - Social, Ethical & Human Issues

Not Assessed in this task

IT3 - Productivity Tools

- Entering, selecting, deleting text
- Manipulating styles (e.g., bold face, italicize and underline).
- Illustrating a simple concept using a paint application.
  Note: It is suggested you look specifically at students' ability to effectively use common paint tools such as the line, oval, rectangle, paint brush, text, selection, spray can/air brush, and eraser.
- Entering information into a teacher created template (e.g. concept map).
  Note: Students should demonstrate their ability to add text, change symbols (block to oval, etc.), change color of symbol backgrounds, increase/decrease font sizes, add symbols, add connecting lines to symbols, and manipulate connecting lines between symbols.

IT4 – Communication

Not Assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not Assessed in this task

Glossary:

Visual Organizer: a software program that is designed to allow students to create and manipulate text (or graphics) through a visual representation of some concept or relationships. They are often referred to mind-maps, cluster maps, etc.
Paint: A computer application that allows students to sketch directly onto a background palette. The use of pens or brushes and erasers are typical tools in a Paint program.

Resources:

Visual Organizers
http://www.bucks.edu/~specpop/visual-org.htm
http://www.nss-nrs.com/cgi-bin/WebObjects/NSS.woa/wa/Seminars/detail?id=1000334
http://wwwadmin.cl.uh.edu/itc/course/INST/6031/html/organizers.html

Grade Cluster 1-2 Task # 2

The Grade Cluster & Task #: Grade Cluster 1-2, Task # 2
The Product: Written Sequence of steps
The Components: Word Processing, Basic Operations
The Task:

Students will create a written sequence of steps using a word processing program.

Students will launch a Word Processing application. Students will list the steps of a simple procedure. Entering the steps of the (given) procedure students will demonstrate their ability enter and edit text. They will use the proper keys to format and punctuate the text. They will add basic formatting (increase font size and bold face) and alignment (center title using the centering alignment tool). Once approved by their teacher, students will save and print the document. Using their mouse, students use cut/copy/paste (using right-click or click/hold) to rearrange the procedure (out of order), Students switch computers with a partner who will put the procedure in the correct order without using the keyboard.

IT1 - Basic Operations & Concepts

- Differentiating between right and left mouse click [Windows] or click, hold, and drag [Mac/Windows], recognizing and using keys: letters, numbers, and space bar, shift, return/enter, punctuation, delete/backspace keys)
- Launching a program from the desktop using a shortcut or alias.
- Creating, opening, saving, and printing a document.
- Cutting, copying, and pasting within a document.

IT2 - Social, Ethical & Human Issues

Not Assessed in this task

IT3 - Productivity Tools

- Entering, selecting, deleting text
- Manipulating styles (e.g., bold face, italicize and underline).

IT4 - Communication

Not Assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not Assessed in this task

Grade Cluster 1-2 On-going

The Grade Cluster & Task #: Grade Cluster 1-2, On-going
The Product: No Product
The Components: Basic Operations, Social, Ethical & Human Issues, Communications
The Task: No Task
Rationale:

The following Grade Expectations could be assessed over time. We suggest that you assess these purposefully at various points during the grade cluster and record the results each time. You may find that some are easily embedded into another task.

IT1 - Basic Operations & Concepts

- Using removable media (e.g., floppy disk, CD, DVD)
- Minimizing applications
- Logging in and out of a computer.

IT2 - Social, Ethical & Human Issues

- Describing and practicing responsible use of technology (e.g., taking turns using technology equipment)

IT3 - Productivity Tools

IT4 - Communication

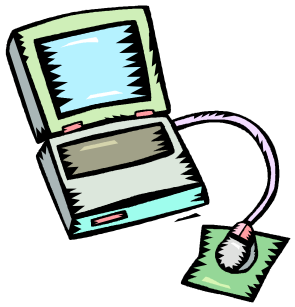
- Identifying components of multi-media presentations (e.g., title, transitions, sound effects, animation, text and graphics).

IT5 - Research, Problem Solving & Decision Making

Glossary

Removable Media: Transportable drives or disks that can be moved easily from one computer to another.

Technology Performance Assessment Tasks



Grades 3-4

Grade Cluster 3-4 Task # 1

The Grade Cluster & Task #: Grade Cluster 3-4, Task # 1
The Product: A Research Presentation
The Components: Basic Operations, Online Research, Multimedia Presentation
The Task:
Students will make a multimedia presentation to class on an assigned or self-selected topic.

Students will research a given or self-selected topic using the school library electronic card catalog, as well as other online and electronic resources including removable media.

Students will locate and open a web browser from the desktop. Using the navigation functions of the web browser, students will move to various pre-selected sites to gather information from the Internet.

Rationale:
Students can locate a greater wealth of information in a much more timely fashion using electronic resources. Using the World Wide Web links and addresses provided by their teacher, students can locate pertinent, reliable and safe Internet sites. Finally, students will use multimedia tools to present their information. Multimedia tools support their author's oral presentations. They can also be used as a kiosk.

IT1 - Basic Operations & Concepts

- Launching a program from the desktop

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

Not assessed in this task

IT4 - Communication

- Creating a slide presentation including title slide, graphics, text, voice, sound related to topic and documentation of sources.

IT5 - Research, Problem Solving & Decision Making

- Using multiple resources including:
  - Library catalog
  - Electronic resources
  - Internet web pages
- Navigating to various websites by typing a URL into a browser or using a list of links identified by the teacher.
- Navigating using forward, back, home, and refresh.
- Using hyperlinks to navigate the world wide web.

Glossary

URL – Universal Resource Locator – a web address

Resources

Multimedia –

http://www.youthlearn.org/learning/activities/multimedia/presentations.asp
http://www.ncsu.edu/midlink/rub.pres.html
http://www.actden.com/pp/

Grade Cluster 3-4 Task # 2

The Grade Cluster & Task #: Grade Cluster 3-4, Task # 2
The Product: A Flowchart
The Components: Visual Organizer, Paint,
The Task:
Students will create a concept map that contains their own illustrations.
Given a teacher or student defined problem, students will create a flowchart that outlines probable steps to solve the problem. They will use a painting program to illustrate some of the concepts and import them into the map.

Rationale:
The ability to manipulate steps and consequences visually assists students with difficult conceptual material. The computer acts as a mediator between abstract and concrete concepts.
Many times, an idea or concept can be best presented through a picture/painting. Students will use a Paint program, which allows easy editing, to illustrate an important idea of concept

IT1 - Basic Operations & Concepts

- Launching a program from the desktop

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

- Illustrating a simple concept using a paint application showing evidence of the following:
  - paint brush
  - line
  - rectangle
  - oval
  - flood fill
  - line thickness,
  - brush shapes
  - colors
- Illustrating a simple concept (e.g., concept map, web, bubble, etc.)
  Note: Students should demonstrate their ability to add text, change symbols (block to oval, etc.), change color of symbol backgrounds, increase/decrease font sizes, add symbols, change symbols to graphics, add connecting lines to symbols, and manipulate connecting lines between symbols, change their "map" to outline format (if available), add noted to their symbols (if available).

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Visual Organizer: a software program that is designed to allow students to create and manipulate text (or graphics) through a visual representation of some concept or relationships. They are often referred to mind-maps, cluster maps, flowcharts, cause and effects relationships, etc.
Paint: A computer application that allows students to sketch directly onto a background palette. The use of pens or brushes and erasers are typical tools in a Paint program.

Resources:

Visual Organizers
http://www.bucks.edu/~specpop/visual-org.htm
http://www.nss-nrs.com/cgi-bin/WebObjects/NSS.woa/wa/Seminars/detail?id=1000334
http://wwwadmin.cl.uh.edu/itc/course/INST/6031/html/organizers.html
http://staff.killingly.k12.ct.us/socialstudies/graphicorganizerchecklist.htm

Grade Cluster 3-4 Task # 3

The Grade Cluster & Task #: Grade Cluster 3-4, Task # 3
The Product: A Newsletter
The Components: Desktop Publishing, Online Research, Email
The Task:
Students will research a topic and publish a newsletter that contains text and graphics captured with digital tools (digital camera, scanner, etc.).

Prior to conducting electronic research, students will prepare an off-line search strategy to locate Internet resources and be able to justify the validity of the criteria they have selected. Using a search engine pre-determined by the teacher, students will implement their search criteria and identify pertinent sites. Once the sites have been approved by their teacher, they will gather information.

Demonstrating effective keyboarding techniques, they will incorporate information gathered through their Internet research, email (individual or group account), and an onsite or online electronic encyclopedia. Students will appropriately cite information gathered.

Rationale:
Creating a newsletter with a word processor or desktop publishing program allows students to create a "professional looking" document. Graphics, drawing elements, and formatting are easily incorporated. Creating a banner and columns allows for an attractive yet easily editable document.

Students need to learn how to prepare for searching on the Internet. Preparing off-line searches will allow them to think about and plan their search before going on-line. Once sites have been located, it is still important at this age that teachers closely monitor the site for pertinence, accuracy, reliability and safety.

IT1 - Basic Operations & Concepts

- Using removable media (e.g., floppy disk, CD, DVD)
- Launching a program from the desktop using a shortcut or alias.
- Using effective keyboarding:
  - posture (i.e., back straight, body leaning slightly forward, etc.
  - techniques (e.g., eyes on monitor or copy-not the keyboard, etc)
  - attitudes (e.g., willingness to change habits, persistence and diligence)
- Using digital tools to capture images (e.g., scanner, digital camera)

IT2 - Social, Ethical & Human Issues

- Documenting sources of information obtained through electronic resources (e.g., identifying author and URL).

IT3 - Productivity Tools

- Combining text with pictures on a single page (e.g., inserting clipart).

IT4 - Communication

- Sending an email message to another local user.
- Sending an email message to a remote user (i.e., using address with @).

IT5 - Research, Problem Solving & Decision Making

- Accessing information from a workstation, LAN or Internet-based electronic encyclopedia.
- Preparing a search off-line using a teacher-prepared form/strategy.
- Using a search engine predetermined by the teacher, implementing the search strategy developed and locating pertinent information.
- Identifying decisions made, (e.g. representing data, formatting, criteria for search, visual organizer)
  Example: What key words did you use in your internet search?

Glossary:

Removable Media: Transportable drives or disks that can be moved easily from one computer to another.
URL – Universal Resource Locator – a web address
LAN – Local Area Network

Resources:

Search Strategies

http://powerreporting.com/altavista.html
http://www.lib.monash.edu.au/vl/sstrat/sstrcon.htm
http://www.emporia.edu/libsv/workshet.htm

Grade Cluster 3-4 Task # 4

The Grade Cluster & Task #: Grade Cluster 3-4, Task # 4
The Product: A Electronic Graph Made from Survey Results
The Components: Spreadsheet, Graphing, Databases
The Task:
Students will make a graph electronically based on data they collect.

Students will conduct a survey, collect data, and enter the data into a teacher created database. To answer predetermined questions, students demonstrate their ability to browse, sort and search the data. Once the questions are answered, they input selected numerical data into a teacher created spreadsheet which they locate using the Find command. Navigating between two or more open windows, a graph or chart will be produced from the data. Students will explain the relationship between the graphical representation and the numerical data.

Rationale:
Once data is collected, it can easily be manipulated in a database. Students may sort the data alphabetically or numerically and locate specific data using defined criteria. Next, using a spreadsheet, numerical data can easily be entered and turned into a graph. Once completed, the graph can be edited by changing the numbers in the spreadsheet. This causes dynamic changes in the resulting graph and students can see the relationship between the numbers and the graphical representation. The entire process of creating and editing is much more efficient and much less time consuming than creating one manually.

IT1 - Basic Operations & Concepts

- Navigating between open windows
- Locating files and folders using the Find command.

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

- Entering data into and manipulating an existing data base by browsing, sorting and searching/ finding/querying.
- Entering data into a spreadsheet template.
- Explaining the relationship between data and visual representation (graph).
- Creating a graphical representation of numerical data (e.g., bar line, and pie).

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Spreadsheet- A spreadsheet is a grid that organizes data into columns and rows. Spreadsheets make it easy to display information, and people can insert formulas to work with the data.
Database – collection of information organized in such a way that a computer program can quickly select desired pieces of data. You can think of a database as an electronic filing system.

Resources:

Database

http://www.webopedia.com/TERM/d/database.html
http://www.library.arizona.edu/rio/db2.html

Database Tutorial

http://www.geekgirls.com/menu_databases.htm

Spreadsheet

http://www.mathsnet.net/spreadsheet/
http://www.dbcc.cc.fl.us/fipse_sh/spreadsheet1.htm

Spreadsheet Tutorial - http://www.sir.arizona.edu/sm97/506/spreadsheet.htm
http://science.csustan.edu/tutorial/Excel/
http://www.quasar.ualberta.ca/edpy202/tutorial/spreadsheet/spreadsheet.htm
http://www.thinkquest.org/library/site_sum.html?tname=J0110054&url=J0110054/definition.html

Grade Cluster 3-4 Task # 5

The Grade Cluster & Task #: Grade Cluster 3-4, Task # 5

The Product: Students will write a brief essay on Social, Ethical & Human Issues

The Components: Operations, Social, Ethical & Human Issues, Productivity Tools

The Task:
After research and discussion, students will create a Word Processed document that describes safe and responsible use of technology and personal consequences of inappropriate use.

To enhance their document, they will incorporate non-textual elements and manipulate styles. They will Cut text from their electronic research and Paste it into their paper applying quotation marks and properly referencing the source. They will spell check the document.

In a shared network directory, students will create and name their own folder. Within that folder, they will create a subsequent (nested) folder and name it. They will save their work to this location.

Rationale:
Students need to become responsible digital citizens. They need to understand their relationship and responsibility to others as it applies in the "digital world".

IT1 - Basic Operations & Concepts

- Creating, naming, and renaming folders.
- Creating folders within folders (nested folders).
- Cutting, copying, and pasting within a document and across documents

IT2 - Social, Ethical & Human Issues

- Describing basic issues related to the responsible and safe use of technology. (e.g., appropriate use of email, respect for others' electronic property, maintaining confidentiality)
- Describing personal consequences of inappropriate use.

IT3 - Productivity Tools

- Adding non-textual elements (e.g., arrows, lines, shapes, etc.).
- Manipulating styles (e.g., fonts, style, size, color of text, alignment).
- Using spell check

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Resources:

Inappropriate Use
http://www.state.ia.us/educate/ecese/is/ecn/primaryse/tppse05l.htm

Grade Cluster 3-4 On-going

The Grade Cluster & Task #: Grade Cluster 3-4, On-going
The Product: No Product
The Components: Basic Operations, Productivity Tools, Communications
The Task: No Task

Rationale:

The following Grade Expectations could be assessed over time. We suggest that you assess these purposefully at various points during the grade cluster and record the results each time. You may find that some are easily embedded into another task.

IT1 - Basic Operations & Concepts

- Recognizing and using keys: shift, return/enter, punctuation, delete/backspace, control/ command, tab, escape keys)
- Logging in and out of a network.
- Opening documents from and saving documents to multiple locations (e.g.,: c drive, network drive, removable media).

IT2 - Social, Ethical & Human Issues

IT3 - Productivity Tools

- Using grade appropriate calculator and applications/functions (e.g., basic operations).

IT4 - Communication

- Describing a web page, home page and website
- Differentiating between an email and web address.

IT5 - Research, Problem Solving & Decision Making

Technology Performance Assessment Tasks

Grades 5-6

Grade Cluster 5-6 Task # 1

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 1
The Product: A Written Report with Graphics/Illustrations
The Components: Word Processing, Paint/Draw, Digital Imaging Tools
The Task:
Students will develop a report on a specific topic. Using proper keyboarding techniques, they will use a word processor to write the first and subsequent drafts. . The report will include a bibliography

Additionally, they will edit using spellchecker, grammar checker and thesaurus. Document will be properly formatted and non-textual elements added.

They will embed two pieces of art: one which has been created in a paint and/or draw application and another that has been imported from a scanner or digital camera and modified and import them both into the word-processed document. Both images will be resized and text wrap applied.

Rationale:
Writing is much easier on a word processor if the writer has keyboarding skills. Students generally prefer to edit their writing using a word processor. Using a word processor, it is relatively easy to insert images within the writing and to place it so that the text wraps around it. This produces a professional looking document. The use of digital imaging tools provides access to "real world" content and allows it to be embedded throughout the document.

IT1 - Basic Operations & Concepts

- Using effective keyboarding:
  - posture (i.e., back straight, body leaning slightly forward, etc.)
  - techniques (e.g., eyes on monitor or copy-not the keyboard, etc.)
  - attitudes (e.g., willingness to change habits, persistence and diligence).

IT2 - Social, Ethical & Human Issues

- Documenting sources of information obtained through electronic resources using acceptable formats.

IT3 - Productivity Tools

- Embedding an original piece of art, applying text wrap and resizing.
- Adding non-textual elements (e.g., arrows, lines, shapes, etc.).
- Manipulating styles and formats (e.g. header, footer, borders, page breaks, lists).
- Using spell check, and thesaurus.
- Modifying a digital image using flip; rotate, resize, crop

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Digital Imaging Tools: digital camera, scanner, graphics tablets, etc.
Text Wrap: A feature supported by many word processors that enables you to surround a picture or diagram with text. The text wraps around the graphic. Text wrap is also called *text flow*.
Paint: A computer application that allows students to sketch directly onto a background palette. The use of pens or brushes and erasers are typical tools in a Paint program.
Draw: A computer application that allows students to create objects (rectangles, ovals, lines, etc.) that "float" over the background as opposed to being a part of the background itself (as in Paint).

Resources:

Acceptable Use Formats

http://www.bedfordstmartins.com/online/citex.html
http://www.hcc.hawaii.edu/education/hcc/library/mlahcc.html
http://www.fcps.k12.va.us/KeyMS/library/bibliography.html

Grade Cluster 5-6 Task # 2

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 2
The Product: A Presentation based on an Individual Research Project
The Components: Multimedia, Online Research, Visual Organizer
The Task:
Students will create a multimedia presentation to communicate their findings of a research topic.

Students will prepare, justify and implement their own offline search strategy using Boolean logic.

They will locate accurate, appropriate, reliable and relevant information using digital encyclopedias, specialized CDs and the Internet, observing proper copyright and fair use guidelines.

They will plan and create a storyboard using a visual organizer, solicit teacher feedback, and create a multimedia presentation to communicate their research findings

Rationale:
On-line research makes available a wealth of information not otherwise readily available to students. It also brings with it the potential to be overwhelmed by too much information. By carefully planning the Internet search, and using the more sophisticated search algorithms, students can minimize the magnitude of information they have to deal with. Students must continually document their sources.

Planning is an essential part of presenting. Digital tools like Visual Organizers make planning much easier and more flexible and give students a more concrete approach to their presentation.

IT1 - Basic Operations & Concepts

Not assessed in this task

IT2 - Social, Ethical & Human Issues

- Demonstrating an understanding of copyright and fair use guidelines for educational purposes.
- Articulating and providing examples of relevant, reliable and unreliable Internet resources.

IT3 - Productivity Tools

- Illustrating a concept with topic and sub-topics, selecting different shapes and colors to differentiate various levels or processes (e.g., concept map, web, bubble, flow chart).

IT4 – Communication

- Creating a linear or non-linear presentation including title slide, graphics, text, voice, sound related to topic, scanned or digital photo, animation, bibliography and table of contents.

IT5 - Research, Problem Solving & Decision Making

- Locating information that is accurate, relevant and appropriate, using a variety of electronic resources including digital encyclopedias, specialized CDs and the Internet.
- Preparing a search off-line without using a teacher-prepared form/strategy.
- Implementing a search strategy using Boolean logic (e.g., and, or, not).
- Bookmarking sites relevant to their research and organizing sites into categories.
- Identifying and justifying decisions made, (e.g. representing data, formatting, setting up formula, selecting criteria for search, visual organizer)
  Example: What key words did you make and why? Are there other words that might have worked better?

Glossary:

Boolean Logic: Use such operators as AND, OR, NOT to control the search in a more finite way.
Fair Use Guidelines: Educators and students are allowed a wider latitude in using text, images, videos, etc. for educational purposes. But there are still limits. Visit the resource below to learn more about "Fair Use."
Story Board: A storyboard is a series of illustrations that represent a process, such as the steps of interacting with a computer or website. Storyboards are useful for presentations, such as with focus groups, and for checking that the steps of a process make sense once the **details are sketched.**
Visual Organizer: a software program that is designed to allow students to create and manipulate text (or graphics) through a visual representation. They are often referred to mind-maps, cluster maps, flow charts, etc.

Resources:

Boolean Logic -
http://www.ithaca.edu/library/course/expert.html
Fair Use Guidelines –
http://www.adec.edu/admin/papers/fair10-17.html
Story Board -
http://www.uncc.edu/webcourse/sb/storyboard.htm
Visual Organizers –
http://www.bucks.edu/~specpop/visual-org.htm
http://www.nss-nrs.com/cgi-bin/WebObjects/NSS.woa/wa/Seminars/detail?id=1000334
http://wwwadmin.cl.uh.edu/itc/course/INST/6031/html/organizers.html

Grade Cluster 5-6 Task # 3

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 3
The Product: Class Published Research Findings
The Components: Online Research, Database, Web Publishing
The Task:
Students will create a class web site to present their research findings. Each student will build one page for the site.

Students will gather information on a topic centered on a class theme (explorers, weather, inventions) using both the Internet and data collected via email.

Students will use advanced search techniques to locate information from the Internet about their topics.

Once a sufficient amount of data is collected, students will enter the data into a existing class database. Students will use the database to analyze the information.

Once the data has been carefully analyzed, students will produce and publish their individual findings on a class web site.

Rationale:
The Web allows students to publish their work for the ultimate audience… the world. Collecting data from "experts" will be a challenge but students have a much wider reach using the Internet and email. Analyzing data in a database will allow students to manipulate and make sense of their data. It will allow them to query the information in a way not possible in a non-electronic medium.

IT1 - Basic Operations & Concepts

Not assessed in this task

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

- Identifying components of data base including field/category, record, file.
- Identifying single and multiple record formats.
- Entering data into an existing database

IT4 - Communication

- Describing the components of a web address (e.g. ~, /, . edu, .com, .gov, etc.).
- Creating a web page including text, graphics, tables and internal and external links.
- Sending and receiving an email attachment.
- Including the text of the original message in their reply (using quote).
- Forwarding mail.
- Using cc: to copy a message to another individual.
- Using reply options (e.g., reply sender, reply group, reply conference)

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Database - A collection of information organized in such a way that a computer program can quickly select desired pieces of data. You can think of a database as an electronic filing system.
Field/Category: a label for a single piece of information. For example. "First Name", or "Last Name" , or "Phone Number". Each of these is a field/category.

Record: A group of fields with some commonality. For example: the three fields from above in one form would constitute a record.

Single format: A view that allows only a single record to be viewed.

Multiple format: A view that allows more than one record to be viewed. For example: A list view or table view would show multiple records.

File: A collection of multiple records.

Resources:

Database -

http://www.webopedia.com/TERM/d/database.html

http://www.library.arizona.edu/rio/db2.html

Database Tutorial –

http://www.geekgirls.com/menu_databases.htm

Grade Cluster 5-6 Task # 4

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 4
The Product: A Report Containing Text and Visual Representations
The Components: Basic Operations, Spreadsheet, Graphing, Word Processing
The Task:
The students will create a report on a given or self-selected topic, which contains visual as well as textual representations of their findings.

Subsequent to initial research on a given or self-selected topic, students will create hypotheses for their topics. Using digital tools, students will collect data to prove or disprove their hypotheses.

Data collected will be entered into a spreadsheet where it will be manipulated and calculated. Graphs will be made within the spreadsheet and exported into a final report that will be completed using a word processor. The final document will include text, table(s) and the exported chart(s).

Rationale:
Using a spreadsheet to manipulate numerical data is much more efficient than trying to do it manually. Once the data is analyzed, it can easily be entered into a graph or chart.

IT1 - Basic Operations & Concepts

- Navigating between open windows and applications.
- Using digital tools to capture images and other information (e.g. temperature, light, sound, etc.) and import them into a computer.

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

- Manipulating styles and formats (e.g. header, footer, borders, page breaks, lists).
- Using spell check, and thesaurus.
- Creating a table
- Creating a spreadsheet from a blank page, including simple formulas and simple functions (SUM and AVG).
- Creating a graphical representation of multiple series of numerical data.
- Manipulating format (e.g., resizing rows and columns, font, colors, hiding grid)

IT4 - Communication

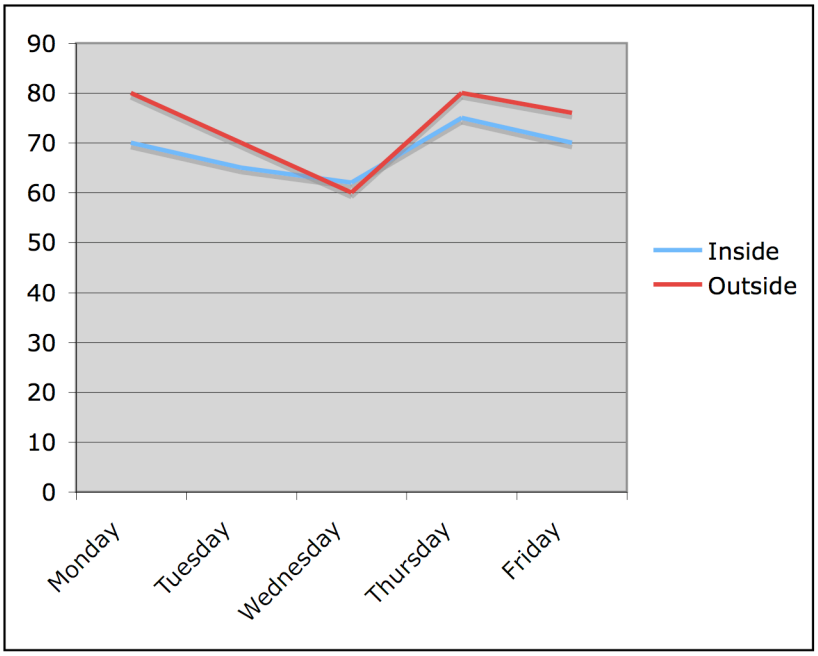
Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Multiple Series: More than one sequence of data points. Example: Take the inside temperature and outside temperature everyday for a week. Graph the results.



Resources:

Spreadsheet Tutorial - http://www.sir.arizona.edu/sm97/506/spreadsheet.htm
http://science.csustan.edu/tutorial/Excel/
http://www.quasar.ualberta.ca/edpy202/tutorial/spreadsheet/spreadsheet.htm

Grade Cluster 5-6 Task # 5

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 5
The Product: Visual Representation of Data
The Components: Database, Paint/Draw, Calculator
The Task:
Students will "publish" visual representations and interpretations of data they have collected and analyzed.

Students will collect information on a pertinent topic to class studies. Each student will create a database and enter information solicited from other students on their team.

They will use calculators to determine percentages and consider trends relative to the information collected.

After analyzing the results, each student will illustrate their interpretation of some aspect of the data using both a paint and draw application, comparing and contrasting each.

They will save their images in multiple formats for compatibility with the web and local applications. Students will publish their illustrations in a format agreed upon by their teacher.

Rationale:
Using a database to sort, search and compare information allows students to analyze this information in a very efficient manner. Illustrating data visually takes into account students varied learning styles.

IT1 - Basic Operations & Concepts

- Identifying and saving documents in multiple formats (e.g.,.doc, .jpg, .pdf, .rtf).

IT2 - Social, Ethical & Human Issues

Not assessed in this task

IT3 - Productivity Tools

- Creating, entering and manipulating a data base using ascending and descending sorting, and searching/finding/ querying, using single criterion.
- Creating original illustrations using paint and draw applications
- Comparing and contrasting the uses of a paint and a draw application
- Saving graphic images in multiple formats (e.g., .jpg, tif, gif)
- Using grade appropriate calculator and applications/functions (e.g., basic operations, fraction-decimal conversion, percentage).

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Paint: A computer application that allows students to sketch directly onto a background palette. The use of pens or brushes and erasers are typical tools in a Paint program.

Draw: A computer application that allows students to create objects (rectangles, ovals, lines, etc.) which "float" over the background as opposed to being a part of the background itself (as in Paint).

File Formats: Files have different ways of being saved depending upon how they will be used. For example, a Microsoft Word document is typically saved as a Word file… it has an extension of .doc. The same document can also be saved as a web page with a .htm extension. This document would then be

viewable on the web. The same document can also be saved as a text file (.txt) allowing other word processing programs to view it.

In the graphics world, file formats are also important and a variety are available. For example, if you have a picture that you want to use on the web, you would typically use a .gif or .jpg format. These file formats are accessible by almost any computer. Other graphic formats are also available such as .bmp, .tiff and .pic.

Resources:

File Formats

http://www.matisse.net/files/formats.html
http://www.stack.com/file/extension/

Grade Cluster 5-6 Task # 6

The Grade Cluster & Task #: Grade Cluster 5-6, Task # 6
The Product: A Poster
The Components: Word Processing, Basic Operations, Social Ethical, Human Issues

The Task:
Students will create a Poster that describes/displays the personal and interpersonal consequences of inappropriate use of technology.

They will locate and launch a word processing program and an Internet Browser. Using the Word Processor, they will open an existing file from the teacher's folder that contains questions they must answer.

After finding information on the Internet regarding in/appropriate use of technology, they will select that information and using a contextual menu, move that text between the open applications appropriately citing as necessary. Then they will save their notes to a nested folder they have previously created and named. They will then copy that folder into the teacher's folder.

Finally, using their notes, they will create their poster using proper formatting techniques. They will spell check the final document.

Rationale:
In this Task, students will demonstrate both their knowledge of appropriate uses of technology and of basic technology operations. Understanding how to navigate within a computer and use the basic tools is important for effective and efficient use. Knowing what is appropriate and inappropriate when it comes to using technology is critical. The Poster allows students to creatively demonstrate the knowledge gleaned from research. It provides a vehicle for students at this grade level (who love a cause) to promote appropriate use and practice.

IT1 - Basic Operations & Concepts

- Right clicking [Windows] or clicking, holding, and dragging [Mac/Windows] presents a contextual menu.(e.g., right clicking on an image offers a menu of choices about what you want to do with the image), control/command, escape keys
- Launching a program by locating it on the internal, external, or network drive.
- Navigating between open windows and applications.
- Opening documents from and saving documents to nested folders
- Creating, naming, and renaming folders.
- Creating folders within folders (nested folders).
- Copying and moving files and folders.
- Cutting, copying, and pasting within a document, across documents, and across applications.

IT2 - Social, Ethical & Human Issues

- Describing personal and interpersonal consequences of inappropriate use.

IT3 - Productivity Tools

- Adding non-textual elements (e.g., arrows, lines, shapes, etc.).
- Using spell check, and thesaurus.

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Contextual Menu: Options provided by the computer dependent upon what you are doing. For example, Windows uses right mouse click and Macintosh uses click and hold or Control Click to present options such as saving a Browser picture to your disk.

Nested Folders: Folders within folders.

Resources:

Inappropriate Use
http://www.state.ia.us/educate/ecese/is/ecn/primaryse/tppse05l.htm

Grade Cluster 5-6 On-going

The Grade Cluster & Task #: Grade Cluster 5-6, On-going
The Product: No Product
The Components: Basic Operations, Social, Ethical, Human Issues, Research & Problem Solving
The Task: No Task

Rationale: The following Grade Expectations could be assessed over time. We suggest that you assess these purposefully at various points during the grade cluster and record the results each time. You may find that some are easily embedded into another task.

IT1 - Basic Operations & Concepts

- Locating files and folders using the Find command.
- Uses shortcuts/alias

IT2 - Social, Ethical & Human Issues

- Exhibiting safe, legal and ethical behaviors when using technology.

IT3 - Productivity Tools

IT4 - Communication

IT5 - Research, Problem Solving & Decision Making

- Selecting the appropriate tools and technology resources to address a variety of tasks and problems (e.g., spread sheet vs. data base, word processing vs. presentation program.)
- Applying technology skills to learning unfamiliar technologies (e.g., digital cameras, scanners, probes)
  Example: What are the first steps you would take to figure out how to use a new technology?
- Using electronic Help to solve a problem

Technology Performance Assessment Tasks

Grades 7-8

Grade Cluster 7-8 Task # 1

The Grade Cluster & Task #: Grade Cluster 7-8, Task # 1
The Product: Newsletter
The Components: Online Research, Scanners, Paint/Draw, Desktop Publishing, Email

The Task:
The students will create a newsletter about the complex system they are studying that will be saved in a universal file format and emailed to their teacher.

After consultation with their teacher, students will select a research topic. They will use a variety of electronic resources including the Internet to locate information.

They will use a digital camera or scanner to capture images and import them into a paint/draw application where they will be modified. They will also create an original illustration using paint/draw tools, and include all in a visual organizer document that represents a complex system (i.e., food chain, passing a bill, natural processes such as volcanoes or digestive system).

As a part of the newsletter, students will present documentation that cites resources used applying copyright/fair use guidelines, and reference the accuracy and relevancy of their content.

Finally, using proper keyboarding techniques, they will create a newsletter that includes the visual organizer "image" and text. They will convert the newsletter file into a universal file format, and send it via email (as an attachment) to a selected individual.

The Rationale:
Locating information from electronic resources will offer the students a variety of informational sources. Justifying their use of a particular source will cause students to think carefully about the information, source, relevancy, and reliability of the information.

Putting together the newsletter as described above will involve many complex steps which will be made possible using information technology tools.

IT1 - Basic Operations & Concepts

- Using effective keyboarding:
  - --posture (i.e., back straight, body leaning slightly forward, etc.)
  - --techniques (e.g., eyes on monitor or copy-not the keyboard, etc.)
  - --attitudes (e.g., willingness to change habits, persistence and diligence and key with speed and accuracy (e.g., 30 words/min with 90% accuracy)
- Using digital tools to capture images and other information (e.g., temperature, light, sound, etc.) and import them into a computer.
- Saving documents in multiple formats (e.g., .doc, .jpg, .pdf, .rtf, source and txt)..

IT2 - Social, Ethical & Human Issues

- Documenting sources of information obtained through electronic resources using acceptable formats.
- Applying copyright and fair use guidelines in student work.
- Explaining the accuracy and relevancy of the content
- Comparing and contrasting information found on the internet for relevancy, accuracy, and reliability.

IT3 - Productivity Tools
• Manipulating styles and formats (e.g., headers, footers, borders, page breaks, tabs and margins, multiple columns, text boxes) linking text blocks, span multiple columns, masthead). • Using spell check, thesaurus and grammar check. • Creating a table • Importing/Inserting objects from other sources • Selecting and using a draw or paint application appropriate for the task. • Modifying a digital image using flip, rotate, resize, crop, select, copy and paste • Selecting and saving images in the appropriate format (e.g., jpg, tif, gif) • Illustrating a variety of relationships, ideas and topics (e.g. cause and effect, Venn diagram, organizational charts, flow chart). • Importing an illustration . • Linking an element to appropriate files and URL(s).
IT4 - Communications
• Attaching a file to an email message and noting in the body the file format.
IT5 - Research, Problem Solving & Decision Making
• Comparing and contrasting: directories, search engines, and meta-search engines. • Implementing a search strategy using Boolean logic (e.g., and, or, not, near).

Glossary:

File Formats: Files have different ways of being saved depending upon how they will be used. For example, a Microsoft Word document is typically saved as a Word file… it has an extension of .doc. The same document can also be saved as a web page with a .htm extension. This document would then be viewable on the web. The same document can also be saved as a text file (.txt) allowing other word processing programs to view it.

In the graphics world, file formats are also important and a variety are available. For example, if you have a picture that you want to use on the web, you would typically use a .gif or .jpg format. These file formats are accessible by almost any computer. Other graphic formats are also available such as .bmp, .tiff and .pic.

Boolean Logic: Use such operators as AND, OR, NOT to control the search in a more finite way.

Fair Use Guidelines: Educators and students are allowed a wider latitude in using text, images, videos, etc. for educational purposes. But there are still limits. Visit the resource below to learn more about "Fair Use

Resources:

Acceptable Use Formats

http://www.bedfordstmartins.com/online/citex.html
http://www.hcc.hawaii.edu/education/hcc/library/mlahcc.html
http://www.fcps.k12.va.us/KeyMS/library/bibliography.html

Fair Use Guidelines

http://www.adec.edu/admin/papers/fair10-17.html

Search Engines – Comparison

http://www.pandia.com/goalgetter/
http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/ToolsTables.html

Boolean Logic

http://www.ithaca.edu/library/course/expert.html

Grade Cluster 7-8 Task #2

The Grade Cluster & Task #: Grade Cluster 7-8, Task # 2
The Product: A Persuasive Presentation
The Components: Spreadsheet, Graphing, Multimedia
The Task:
Students will create a linear multimedia presentation (slideshow) that will include a persuasive argument utilizing charts to support a conjecture.

Students will conduct a survey collecting numerical information and enter it into a spreadsheet that they format. They will analyze the data to draw conclusions. After meeting with the teacher to define the nature of the data, they will present their information in a graphical representation. They will move their charts from the spreadsheet to the multimedia application and will present their findings.

Rationale:
Using a spreadsheet to analyze numerical data offers students a reliable way to consider many options and alternatives. It provides opportunities for students to visualize the relationship between variables.

IT1 - Basic Operations & Concepts

- Cutting, copying, and pasting within a document, across documents, and across applications.

IT2 - Social, Ethical & Human Issues

Not Assessed in this task

IT3 - Productivity Tools

- Creating a spreadsheet from a blank page, including formulas and functions (MIN, MAX MEDIAN, MODE, ROUND), formatting cells (e.g. numeric, monetary, percent, values).
- Creating a graphical representation appropriate to the numerical data (e.g., scatter plot, x-y)
- Manipulating format (e.g., resizing rows and columns, font, colors, hiding grid)

IT4 - Communication

- Creating a linear and non-linear presentation including title slide, graphics, text, voice, sound related to topic, scanned or digital photo, animation, bibliography and table of contents, video clip

IT5 - Research, Problem Solving & Decision Making

Not Assessed in this task

Glossary:

Spreadsheet- A spreadsheet is a grid that organizes data into columns and rows. Spreadsheets make it easy to display information, and people can insert formulas to work with the data.

Resources:

Spreadsheet -
http://www.mathsnet.net/spreadsheet/
http://www.dbcc.cc.fl.us/fipse_sh/spreadsheet1.htm
Spreadsheet Tutorial –
http://www.sir.arizona.edu/sm97/506/spreadsheet.htm
http://science.csustan.edu/tutorial/Excel/
http://www.quasar.ualberta.ca/edpy202/tutorial/spreadsheet/spreadsheet.htm
http://www.thinkquest.org/library/site_sum.html?tname=J0110054&url=J0110054/definition.html
Multimedia –
http://www.youthlearn.org/learning/activities/multimedia/presentations.asp
http://www.ncsu.edu/midlink/rub.pres.html
http://www.actden.com/pp/

Grade Cluster 7-8 Task #3

The Grade Cluster & Task #: Grade Cluster 7-8, Task # 3
The Product: An Investigative Report
The Components: Database, Social, Ethical, & Human Issues, Multimedia
The Task:
Students will create a non-linear multimedia presentation through which they report the results of an investigation.

Students will focus this task on a specific research question. They will design and create a database that includes survey questions to be asked. The questionnaire will include background information explaining the goals of the project.

Once the questionnaires are returned, results will be entered into the database. Data will be sorted by multiple fields and filtered using multiple criteria to generate reports.

Any research including non-original sources will include appropriate references and bibliographic notations. The final product should take the form of a non-linear multimedia presentation.

Rationale:
Empowering students to define their own research project and propose hypotheses is educationally sound and motivating. Asking students to use the same tools as professional scientists and researchers allows them to take part in a real-world authentic experience. Using a database to assist in analyzing information allows students make assumptions and test theories that would otherwise be laborious and time consuming. Rather than spend time with the mechanics of sorting and finding they can bring higher order thinking skills such as analyzing, comparing and synthesizing to bear.

IT1 - Basic Operations & Concepts

Not assessed in this task

IT2 - Social, Ethical & Human Issues

- Documenting sources of information obtained through electronic resources using acceptable formats.

IT3 - Productivity Tools

- Generating a report.
- Creating and manipulating a data base, by entering, sorting, searching/finding/querying and using multiple criteria.

IT4 - Communication

- Creating a linear and non-linear presentation including title slide, graphics, text, voice, sound related to topic, scanned or digital photo, animation, bibliography and table of contents, video clip.

IT5 - Research, Problem Solving & Decision Making

Not assessed in this task

Glossary:

Database - A collection of information organized in such a way that a computer program can quickly select desired pieces of data. You can think of a database as an electronic filing system.
Field/Category: a label for a single piece of information. For example. “First Name”, or “Last Name” , or “Phone Number”. Each of these is a field/category.
Record: A group of fields with some commonality. For example: the three fields from above in one form would constitute a record.

Single format: A view that allows only a single record to be viewed.

Multiple format: A view that allows more than one record to be viewed. For example: A list view or table view would show multiple records.

File: A collection of multiple records.

Resources:

Multimedia –

http://www.youthlearn.org/learning/activities/multimedia/presentations.asp
http://www.ncsu.edu/midlink/rub.pres.html
http://www.actden.com/pp/

Acceptable Use Formats

http://www.bedfordstmartins.com/online/citex.html
http://www.hcc.hawaii.edu/education/hcc/library/mlahcc.html
http://www.fcps.k12.va.us/KeyMS/library/bibliography.html

Database -

http://www.webopedia.com/TERM/d/database.html
http://www.library.arizona.edu/rio/db2.html

Database Tutorial –

http://www.geekgirls.com/menu_databases.htm

Grade Cluster 7-8 Task #4

The Grade Cluster & Task #: Grade Cluster 7-8, Task # 4
The Product: Student published research results
The Components: Email, Spreadsheet, Web Publishing
The Task:
Students will publish a web page that shows the results of their research.

Students will research a topic gathering information from multiple sources including using an email application to communicate with "experts" in the field.

They will then enter their data into a spreadsheet to construct "what-if" scenarios.

Students will publish their results on a web page applying copyright/fair use guidelines and will include a compressed file on their web page and test to make sure it functions appropriately.

Students will create and save in a nested folder a backup of their web page.

Rationale:
Authentic communication with "experts" will empower students to consider real-world problem solving. Manipulation of data within a spreadsheet application allows modeling of "what-if" scenarios.

Publishing on the web allows for a wide audience and brings validity and meaning to the students' research.

IT1 - Basic Operations & Concepts

- Compressing and decompressing files.
- Creating folders within folders (nested folders) in a purposeful structure.
- Creating a duplicate/backup document in another location.

IT2 - Social, Ethical & Human Issues

- Applying copyright and fair use guidelines in student work

IT3 - Productivity Tools

Not assessed in this task

IT4 - Communication

- Creating a web page including text, graphics, tables and relative and absolute links
- Adding an entry into address book and using to send a message.
- Creating a mailing list.
- Combining and compressing multiple files and sending as an attachment.
- Creating a signature.

IT5 - Research, Problem Solving & Decision Making

- Justifying decisions made, (e.g. representing data, formatting, setting up formula, selecting criteria for search)
  Example: How did the bar graph represent the data better than a pie chart?
- Using electronic Help to solve a problem or to learn something new
- Creating and using simulations or models, e.g., spreadsheet to design "what if" scenarios
  Example: What would be the possible effects on the environment of extending the moose-hunting season another week?

Glossary:

Fair Use Guidelines: Educators and students are allowed a wider latitude in using text, images, videos, etc. for educational purposes. But there are still limits. Visit the resource below to learn more about "Fair Use."

Resources:

File Compression –
http://www.pc-shareware.com/unziphow.htm
Fair Use Guidelines –
http://www.adec.edu/admin/papers/fair10-17.html
Web Page Tutorial –
http://spider.georgetowncollege.edu/htallant/courses/his338/tutorial/intro.htm

Grade Cluster 7-8 Task #5

The Grade Cluster & Task #: Grade Cluster 7-8, Task # 5
The Product: Multimedia Concentration Game
The Components: Basic Operations, Research, Social, Ethical & Human Issues
The Task:
After selecting an appropriate search engine to research societal consequences of inappropriate use of technology, students will create an electronic Concentration game. The game categories will include Accuracy, Relevancy, Bias, and Appropriateness and will be linked to examples of each found on the Internet.

Students will locate examples of Accuracy, Relevance, Bias, and Appropriateness on the Internet and save references of them in a shared folder. They will search a shared document folder to locate any pertinent files and copy any found to their own storage location, creating and naming a new folder to house these documents.

Students will select and justify an appropriate electronic tool for the presentation of their information. They will locate that tool and launch it.

Rationale:
Understanding and identifying Accuracy, Relevancy, Bias, and Appropriateness is a critical component of becoming a good digital citizen (Netizen).

The ability to navigate a computer system using the available tools is a critical skill for all students.

IT1 - Basic Operations & Concepts

- Launching a program by locating it on the internal, external, and network drive.
- Opening documents from and saving documents to nested folders.
- Locating files and folders using multiple criteria within the Find command.
- Creating, naming, and renaming folders.
- Copying and moving files and folders.

IT2 - Social, Ethical & Human Issues

- Describing societal consequences of inappropriate use

IT3 - Productivity Tools

Not assessed in this task

IT4 - Communication

Not assessed in this task

IT5 - Research, Problem Solving & Decision Making

- Locating information that is accurate, relevant, appropriate and identifying possible bias (opinion vs. fact) using a variety of electronic resources.
- Selecting and justifying the appropriate tools and technology resources to address a variety of tasks and problems (e.g., spread sheet vs. data base, word processing vs. presentation program.)

Glossary:

Resources:

Inappropriate Use
http://www.state.ia.us/educate/ecese/is/ecn/primaryse/tppse05l.htm

Grade Cluster 7-8 On-going

The following Grade Expectations could be assessed over time. We suggest that you assess these purposefully at various points during the grade cluster and record the results each time. You may find that some are easily embedded into this or another task.

IT1 - Basic Operations & Concepts

- Creates shortcuts/alias

IT2 - Social, Ethical & Human Issues

- Exhibiting safe, legal and ethical behaviors when using technology.

IT3 - Productivity Tools

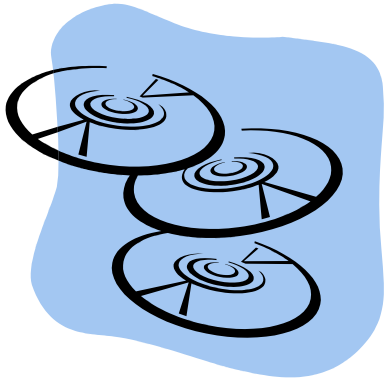
- Using a graphing calculator and grade appropriate applications/ functions (e.g., graphing, statistics, tables).

IT4 - Communication

IT5 - Research, Problem Solving & Decision Making

- Applying technology skills to learning unfamiliar technologies (e.g., digital cameras, scanners, probes) Example: What are the first steps you would take to figure out how to use a new technology?
- Identifying and using a defensible troubleshooting process
- Importing and exporting bookmarks/favorites and organizing sites categorically.

Technology Performance Assessment Tasks



Grades 9-12

Grade Cluster 9-12 Task # 1

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 1
The Product: A Personalized Brochure
The Components: Research, Desktop Publishing
The Task:
Students will develop a research project on a teacher or self-selected topic. They will locate information using specialized online databases and document sources of information using acceptable formats.
Using this information they will create a tri-fold brochure utilizing spell checking, thesaurus and grammar checking.
Using a database, they will enter information and produce individualized content using mail merge capabilities for the brochure.

Rationale: A brochure is a popular form of expression and many examples of this particular form of desktop publishing abound. This is an opportunity for students to display their creativity as well as research skills in a single product. The ability to create personalized content using the mail merge functionality of a database and text processor will help students in understanding how big business can target specific individuals with their advertising.

IT1 - Basic Operations & Concepts

- Not assessed in this task.

IT2 - Social, Ethical & Human Issues

- Documenting sources of information obtained through electronic resources using acceptable formats.

IT3 - Productivity Tools

- Applying styles and formats (e.g., headers, footers, footnotes/endnotes, borders, page breaks, tabs and margins, multiple columns, text boxes, section breaks, pagination, linking text blocks, span multiple columns to create a complex document)
- Using spell check, thesaurus and grammar check.
- Merging from external data source

IT4 - Communication

- Not assessed in this task.

IT5 - Research, Problem Solving & Decision Making

- Locating information from specialized online databases (e.g. post-secondary resources, virtual libraries, periodical databases, and others).

Glossary:

On-line database- An online database is a database system that is accessible through a website. The obvious usefulness of online databases is that they can be accessed from anywhere using a web browser. Compare this to a local database which has to be backed up and transferred manually from one computer to another.

Mail Merge - Mail merge is a tool which allows you to create form letters, mailing labels, and envelopes by linking a main (common) document to a set of data or data source. The main document is linked to the data source by common fields of data, called merge fields.

Resources:

On-line databases - http://www.nassaulibrary.org/lynbrook/researchtools.htm
Documenting sources – Acceptable Use Formats
http://www.bedfordstmartins.com/online/citex.html
http://www.hcc.hawaii.edu/education/hcc/library/mlahcc.html
http://www.fcps.k12.va.us/KeyMS/library/bibliography.html

Grade Cluster 9-12 Task # 2

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 2
The Product: Student Published Research
The Components: Web Publishing, Research, Paint/Draw, Basic Operations
The Task:
After conducting thoughtful research on a self-selected or given topic using electronic resources, students will design and publish a web page that shows the results of their study. Their web page will include information gathered from appropriate Internet search engines utilizing full Boolean logic. They will compare and contrast information they have gathered for relevancy, accuracy and reliability and be able to defend the information selected.

They will create and/or select appropriate graphics, import them into a paint/draw program, modify and convert them with the appropriate tools and save them in an acceptable format. They will include compressed documents for download on the webpage.

Rationale: Web pages have become the "refrigerator door of the 21st century". We should be asking our students to become information **providers**, not just information **consumers**. Publishing a content-driven web page will convey a sense of ownership for the authors and allow them to learn more about the medium they will be using in the future.

IT1 - Basic Operations & Concepts

- Compressing and decompressing files.

IT2 - Social, Ethical & Human Issues

- Comparing and contrasting information found on the internet for relevancy, accuracy, and reliability

IT3 - Productivity Tools

- Selecting and using a draw or paint application appropriate for the task.
- Modifying a digital image using flip, rotate, resize, crop, select, copy, paste
- Selecting, saving and converting images in the appropriate format (e.g., jpg, tif, gif)

IT4 - Communication

- Creating a web page including text, graphics, tables and relative and absolute links, sound elements, graph imported from a spreadsheet, original digital pictures
- Optimizing graphics for web pages for loading over slow Internet connections.

IT5 - Research, Problem Solving & Decision Making

- Selecting an appropriate tool for locating information on the Internet.
- Implementing a search strategy using full Boolean logic with parentheses, e.g., behavior and (cats or felines).

Glossary:

File Formats: Files have different ways of being saved depending upon how they will be used. For example, a Microsoft Word document is typically saved as a Word file… it has an extension of .doc. The same document can also be saved as a web page with a .htm extension. This document would then be viewable on the web. The same document can also be saved as a text file (.txt) allowing other word processing programs to view it.

In the graphics world, file formats are also important and a variety are available. For example, if you have a picture that you want to use on the web, you would typically use a .gif or .jpg format. These file formats are accessible by almost any computer. Other graphic formats are also available such as .bmp, .tiff and .pic.

Boolean Logic: Use such operators as AND, OR, NOT to control the search in a more finite way.

Resources:

File Compression
http://www.pc-shareware.com/unziphow.htm
File Decompression
http://emrl.byu.edu/gsda/data_tips/tip_decompress.html
Boolean Logic
http://www.ithaca.edu/library/course/expert.html

Grade Cluster 9-12 Task # 3

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 3
The Product: A report that uses data to support of refute a hypothesis
The Components: Basic Operations, Database
The Task:
Students will create a hypothesis on a given topic. Using digital tools, they will capture data from a variety of sources and construct a database file. They will sort the records, search using multiple criteria and generate a report supporting or refuting their hypothesis.

Rationale: Given the amount of data on any topic, students need to understand how to organize that data into usable information so that others can benefit from their understanding. Sorting, searching and reporting information will be much faster and give the students tools to query large volumes and concentrate on the meaning of the data rather than the rote manipulation.

IT1 - Basic Operations & Concepts

- Using digital tools to capture images and other information (e.g., temperature, light, sound, etc.) and import them into a computer.

IT2 - Social, Ethical & Human Issues

- Not assessed in this task.

IT3 - Productivity Tools

- Generating a report.
- Creating and manipulating a database, by entering, sorting, searching/finding/querying and using multiple criteria.

IT4 - Communication

- Not assessed in this task.

IT5 - Research, Problem Solving & Decision Making

- Not assessed in this task.

Glossary:

Database – collection of information organized in such a way that a computer program can quickly select desired pieces of data. You can think of a database as an electronic filing system.

Resources:

Database

http://www.webopedia.com/TERM/d/database.html
http://www.library.arizona.edu/rio/db2.html

Database Tutorial

http://www.geekgirls.com/menu_databases.htm

Grade Cluster 9-12 Task # 4

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 4
The Product: An illustration of relationships between and among components within a system
The Components: Visual Organizer, Multimedia
The Task:
Students will use a visual organizer to construct effective organizational charts based upon multiple sets of data. Using the structure and charts from the visual organizer they will develop a multimedia presentation that demonstrates their understanding of a complex system(s).

Rationale: Visual Organizers help students see relationships between and among complex components within a system. The ability to easily rearrange elements and add other elements and layers to the organizational chart assists students with their understanding of both the "forest" and the "trees".

IT1 - Basic Operations & Concepts

- Not assessed in this task.

IT2 - Social, Ethical & Human Issues

- Not assessed in this task.

IT3 - Productivity Tools

- Choosing and creating effective visual organizer to illustrate a variety of relationships, ideas and topics (e.g. cause and effect, Venn diagram, organizational charts, flow chart).
- Importing an illustration .
- Linking an element to appropriate files and URL(s).

IT4 - Communication

- Creating a linear and non-linear presentation including title slide, graphics, text, voice, sound related to topic, scanned or digital photo, animation, bibliography and table of contents, video clip.

IT5 - Research, Problem Solving & Decision Making

- Not assessed in this task.

Glossary:

Visual Organizer: a software program that is designed to allow students to create and manipulate text (or graphics) through a visual representation of some concept or relationships. They are often referred to mind-maps, cluster maps, etc.

Resources:

Visual Organizers

http://www.bucks.edu/~specpop/visual-org.htm
http://www.nss-nrs.com/cgi-bin/WebObjects/NSS.woa/wa/Seminars/detail?id=1000334
http://wwwadmin.cl.uh.edu/itc/course/INST/6031/html/organizers.html

Grade Cluster 9-12 Task # 5

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 5
The Product: Graphs and Charts to support a conclusion
The Components: Spreadsheet, Graphing Calculator
The Task:
Students will create a simulation or model using a graphing calculator. They will use digital tools to capture this data. (e.g., light from a fluorescent bulb, temperature from a variety of liquids over time, etc.) They will then analyze the data and import it into a spreadsheet. Students will manipulate the data appropriately, construct charts to justify their conclusions, and report the results visually.

Rationale: Real-world scientific process is best accomplished using real-world tools. With the ability of technological tools to capture and manipulate data, students will focus on the understanding rather than the recording of data. Once the results are measured and scenarios understood, the learner will engage in presenting their findings. True learning occurs when explanation of that learning is evident.

IT1 - Basic Operations & Concepts

- Using digital tools to capture images and other information (e.g., temperature, light, sound, etc.) and import them into a computer.

IT2 - Social, Ethical & Human Issues

- Not assessed in this task.

IT3 - Productivity Tools

- Creating a spreadsheet from a blank page, including formulas and functions (MIN, MAX, ROUND), formatting cells (e.g., numeric, monetary, percent, values).
- Documenting spreadsheets with named cells and comments
- Creating a graphical representation appropriate to the numerical data (e.g., scatter plot, x-y)
- Manipulating format (e.g., resizing rows and columns, font, colors, hiding grid)
- Referencing formulas from other worksheets
- Using a graphing calculator and grade appropriate applications/ functions (e.g., graphing, statistics, tables, equations, matrix).

IT4 - Communication

- Not assessed in this task.

IT5 - Research, Problem Solving & Decision Making

- Justifying decisions made, e.g. representing data, formatting, setting up formula, selecting criteria for search
- Creating and using simulations or models, (e.g., spreadsheet to design "what if" scenarios)

Glossary:

Spreadsheet- A spreadsheet is a grid that organizes data into columns and rows. Spreadsheets make it easy to display information, and people can insert formulas to work with the data.

Resources:

Spreadsheet

http://www.mathsnet.net/spreadsheet/
http://www.dbcc.cc.fl.us/fipse_sh/spreadsheet1.htm

Spreadsheet Tutorial –

http://www.sir.arizona.edu/sm97/506/spreadsheet.htm
http://science.csustan.edu/tutorial/Excel/
http://www.quasar.ualberta.ca/edpy202/tutorial/spreadsheet/spreadsheet.htm
http://www.thinkquest.org/library/site_sum.html?tname=J0110054&url=J0110054/definition.html

Grade Cluster 9-12 Task # 6

The Grade Cluster & Task #: Grade Cluster 9-12, Task # 6
The Product: A Word Processed Product of Student Choice.
Example: Newsletter, Brochure, Poem, Poster
The Components: Social, Ethical & Human Issues, Word Processing
The Task:
Students will use a word processor to create a product regarding the safe, legal and ethical behaviors among peers and community regarding the use of technology and information. In doing so, they will define, defend and give examples of the use of copyright/fair use guidelines as well as accuracy and relevancy of information.

Rationale: It is critical that all students know and can articulate in their own way the "benefits and dangers," the "rights and wrongs" of using technology. Using a word processor, students will use their creativity to communicate a strong message to their peers regarding safe, legal and ethical behaviors of using technology.

IT1 - Basic Operations & Concepts

- Not assessed in this task.

IT2 - Social, Ethical & Human Issues

- Comparing and contrasting copyright and fair use guidelines for education and other purposes.
- Explaining the accuracy and relevancy of the content
- Defining, defending and demonstrating safe, legal and ethical behaviors among peers and community regarding the use of technology and information.

IT3 - Productivity Tools

- Applying styles and formats (e.g., headers, footers, footnotes/endnotes, borders, page breaks, tabs and margins, multiple columns, text boxes, section breaks, pagination, linking text blocks, span multiple columns to create a complex document)
- Using spell check, thesaurus and grammar check.

IT4 - Communication

- Not assessed in this task.

IT5 - Research, Problem Solving & Decision Making

- Not assessed in this task.

Grade Cluster 9-12 On-going

The following Grade Expectations were not placed in any task yet must be assessed. These tasks may best be assessed over time. However, if you find that any of them conveniently fit into a task you should feel free to assess them at that time.

IT1 - Basic Operations & Concepts

- Saving documents in multiple formats (e.g.,.doc, .jpg, .pdf, html, gif).
- Using electronic Help to solve a problem or to learn something new.
- Copying and moving files and folders.
- Creating a duplicate/backup document in another location.

IT2 - Social, Ethical & Human Issues

IT3 - Productivity Tools

IT4 - Communication

IT5 - Research, Problem Solving & Decision Making

- Justifying the appropriate tools and technology resources to address a variety of tasks and problems (e.g., spread sheet vs. data base, word processing vs. presentation program.)
- Identifying and successfully using a defensible troubleshooting process